



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / MB
15005 / 1505

THRU

KBPC / MB
1510 / 1510

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 15 Amperes

FEATURES

- * Metal case for Maximum Heat Dissipation
- * Surge overload ratings-300 Amperes
- * Low forward voltage drop

MECHANICAL DATA

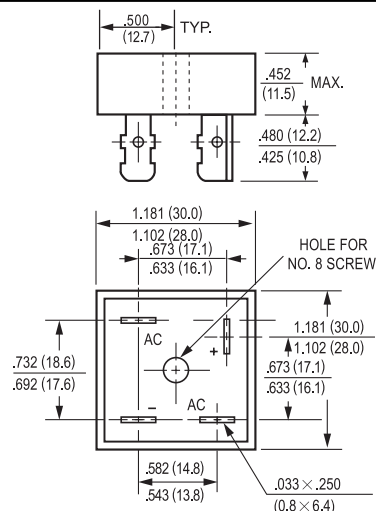
- * Case: Metal case, electrically isolated
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 30 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



MB-25



Dimensions in inches and (millimeters)

		KBPC 15005	KBPC 1501	KBPC 1502	KBPC 1504	KBPC 1506	KBPC 1508	KBPC 1510		
		SYMBOL	MB1505	MB151	MB152	MB154	MB156	MB158	MB1510	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at Tc = 55°C		I _O	15.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	300							Amps
Maximum Forward Voltage Drop per element at 7.5A DC		V _F	1.1							Volts
Maximum DC Reverse Current at Rated	@ Ta = 25°C	I _R	10							uAmps
DC Blocking Voltage per element	@ Tc = 100°C		500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	374							A ² Sec
Typical Junction Capacitance (Note1)		C _J	40							pF
Typical Thermal Resistance (Note 2)		RθJA	19							°C/W
Operating and Storage Temperature Range		T _J ,T _{STG}	-55 to + 175							°C

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.47 x 0.47" (12x12mm) copper pads.

RATING AND CHARACTERISTIC CURVES (KBPC15005 MB1505 THRU KBPC1510 MB1510)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

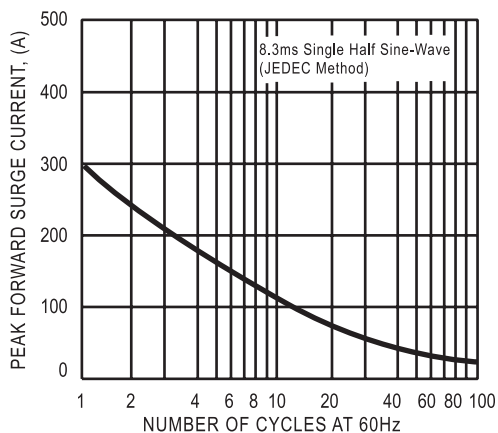


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

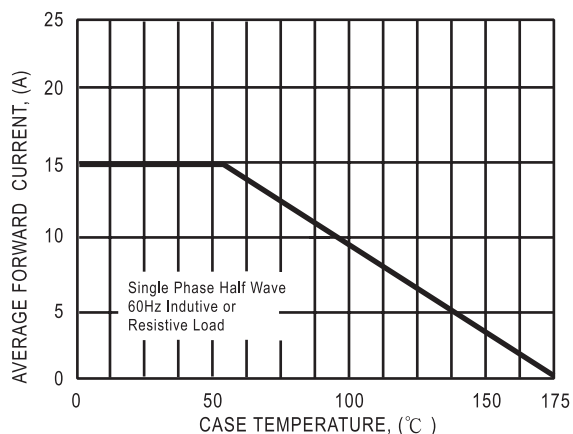


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

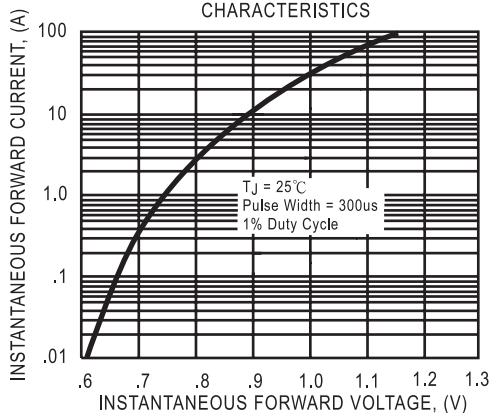
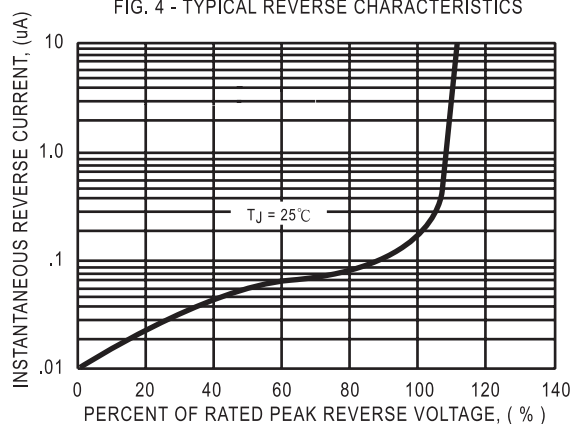


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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MECHANICAL DATA

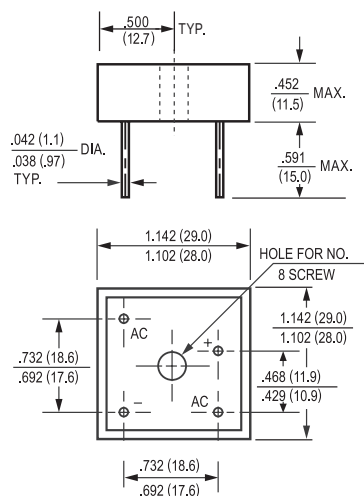
- * Case: Metal, electrically isolated
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 30 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



MB-25W



Dimensions in inches and (millimeters)

		KBPC 15005W	KBPC 1501W	KBPC 1502W	KBPC 1504W	KBPC 1506W	KBPC 1508W	KBPC 1510W		
	SYMBOL	MB1505W	MB151W	MB152W	MB154W	MB156W	MB158W	MB1510W	UNITS	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS Bridge Input Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Output Current at T _c = 55°C	I _O	15							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	300							Amps	
Maximum Forward Voltage Drop per element at 7.5A DC	V _F	1.1							Volts	
Maximum DC Reverse Current at Rated	@ T _A = 25°C	I _R	10							uAmps
DC Blocking Voltage per element	@ T _A = 100°C		500							
I ² t Rating for Fusing (t<8.3ms)	I ² t	374							A ² Sec	
Typical Junction Capacitance (Note1)	C _J	300							pF	
Typical Thermal Resistance (Note 2)	R _{θJC}	2.5							°C/W	
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to + 150							°C	

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance from Junction to Case per leg.

RATING AND CHARACTERISTIC CURVES (KBPC15005W MB1505W THRU KBPC1510W MB1510W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

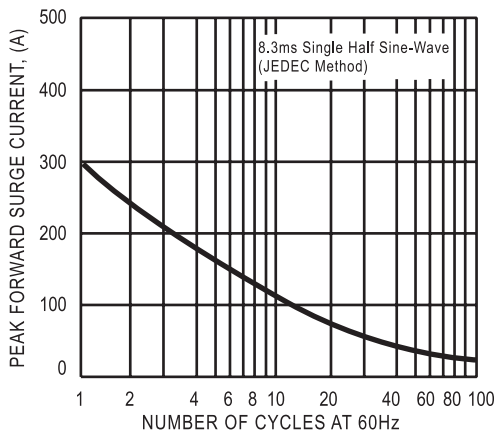


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

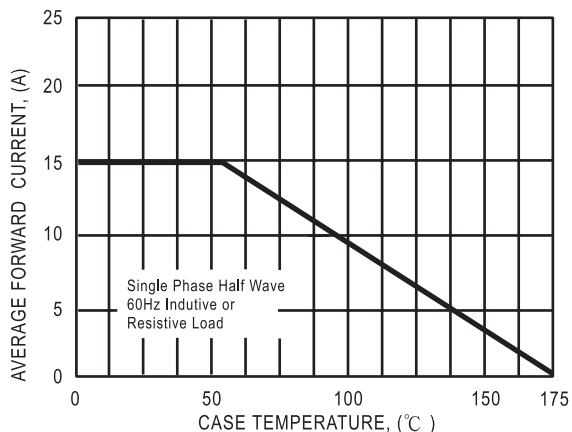


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

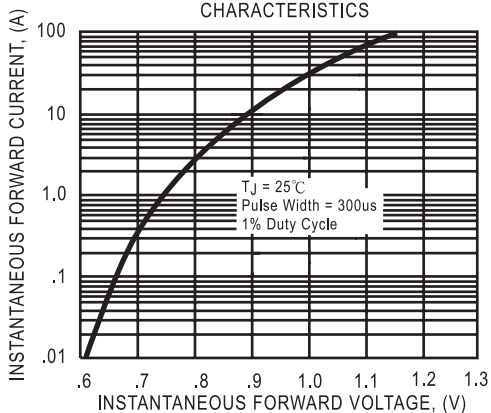
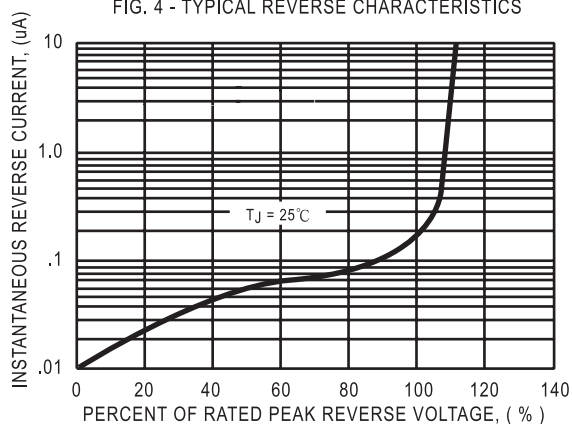


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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